

## ABSTRACT

The present invention provides a fuel cell, which enables to reduce production cost and has excellent cell characteristics. The fuel cell comprises a cell element 20, in which a cathode layer 24 is formed on one side of an electrolyte membrane 22 and an anode layer 26 is formed on the other side thereof, and generates an electromotive force through oxidation-reduction reaction, which occurs via the electrolyte membrane 22, between a fuel such as methane and an oxidant such as oxygen supplied, the fuel cell is characterized in that at least one of the cathode layer 24 and the anode layer 26 contains an electrode material 24a, 26b which is composed of a carbonized silk body obtained by burning a silk material and a catalyst metal supported by the carbonized silk body.